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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,738	02/15/2001	Barrett Richard Bobsein	A01013	2912

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EXAMINER

PEZZUTO, HELEN LEE

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/783,738	Applicant(s) BOBSEIN ET AL.	
	Examiner Helen L. Pezzuto	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 5-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-10 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-4 in the reply filed on 12/13/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 5-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/13/04.

3. This application contains claims 5-10 drawn to an invention nonelected without traverse in paper filed on 12/13/04. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Response to Arguments

Applicant's amendment to claim 1 filed on 12/13/04 is acknowledged. Currently, claims 1-4 are under consideration in this application.

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4. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wesslau et al. (US-410) or EP 0 019 170 or DE 1 696 163.

U.S. 3,365,410 to Wesslau et al. discloses and exemplifies a process of producing binders for paper coating compositions. Prior art binder comprises a mixture of aqueous emulsions of copolymer A and B, each obtained by conventional emulsion polymerization methods using conventional anionic and/or nonionic emulsifiers (col. 3, lines 22-53). Patentees' binder contains 95-60 parts by weight of copolymer A and 5-40 parts by weight of copolymer B (col. 3, lines 54-61; see working examples).

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Specifically, copolymer A has a glass transition temperature between -60° and $+20^{\circ}\text{C}$, within the scope of presently claimed, comprising 10-90 wt% of (meth)acrylic esters having 1 to 8 carbons, including those expressed in claim 3, 10-90 wt% of vinyl ester and up to 10 wt% of other ethylenically unsaturated monomer such as styrene, acrylonitrile, ethylenically unsaturated carboxylic acids and amides(col. 1, line 59 to col. 2, line 45). Prior art emulsion copolymer A embraces the instant copolymer binder a) comprising at least one first, second and third monomers. The copolymer B in prior art comprises 15-55 wt% (meth)acrylic acid, 25-45 wt% of C1-C4 (meth)acrylic esters, and 20-40 wt% of hydrophobic monomers (col. 2, line 68 to col. 3, line 21), which embraces the instant hydrophobically modified alkali soluble emulsion b).

EP-0019170 discloses an aqueous binder dispersion mixture for paper coating, comprising 95-70 pts. wt. of an emulsion copolymer A and 5-30 pts. wt. of an emulsion copolymer B. Specifically prior art copolymer A has a glass transition temperature between -20 and $+10^{\circ}\text{C}$ as expressed in the present claim 1, contains 80-96 wt% of C2-C8 acrylic esters, up to 19.5 wt% of styrene, methyl methacrylate or

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acrylonitrile, and 0.5 to 10 wt% of water-soluble monomers such as C3-C5 carboxylic acid, including (meth)acrylic acid, (meth)acrylamide, and acrylamidopropanesulfonic acid, which clearly encompass the instant at least one first, second and third monomers defined for copolymer binder a). Prior art emulsion copolymer B comprises 85-45% of hydrophobic monomers, up to 10 wt% (meth)acrylamide, and 15-55 wt% (meth)acrylic acid, which falls within the scope of the instant emulsion b). Prior art copolymer A and B are prepared by conventional emulsion polymerization methods in the presence of anionic or nonionic emulsifiers (see working examples).

Similarly, DE 1696163 discloses a paper coating composition containing a binder. Prior art binder is a mixture of 90-99.5 wt% of copolymer A and 0.5-10 wt% of copolymer B. In particular, copolymer A has a glass transition temperature between -60 and +30°C as presently claimed, containing 20-70 wt% of styrene and/or acrylonitrile, 80-30 wt% of C1-C12 (meth)acrylates as expressed in claim 3, and up to 10 wt% of hydrophilic monomers such as (meth)acrylic acid, (meth)acrylamide. Copolymer B contains 70-90 wt% of (meth)acrylic esters, 5-40 wt% of ethylenically unsaturated carboxylic acids having

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3 to 5 carbon atoms and up to 10 wt% of (meth)acrylamide, styrene, acrylonitrile or vinyl acetate. Prior art copolymers A and B are prepared by known emulsion polymerization using conventional additives.

Prior art references disclose the instant binder composition comprising the admixtures of two emulsion copolymers containing suitable monomer combination as defined in the present claims. The references do not expressly exemplify the newly amended second monomer, but do disclose and meet the requirement of at least one first, second and third monomer within the context of copolymer binder a). Accordingly, it would have been obvious to one skilled in the art to formulate a binder composition containing an admixture of two emulsion copolymers as taught in the context of coating composition, motivated by the reasonable expectation of success, absent a showing of unusual or unexpected results.

Regarding the newly amended second monomer constituent, prior art references disclose acrylonitrile in the instant amount as a suitable monomer in the formation of copolymer A. The newly inserted methacrylonitrile is a homologue of the disclosed acrylonitrile, differing by one methyl group. Homologs such as acrylonitrile and

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methacrylonitrile are expected to possess similar properties in the context of coating composition because of their structurally similarity. It is noted that comparative data showing criticality for methacrylonitrile is not made of record, as applicant's examples are directed to coating containing acrylonitrile.

Claim Rejections - 35 USC § 102/103

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US-410 or EP-170 or DE-163 as discussed in the preceding paragraphs and further in view of the following..

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Prior art references discussed above are silent regarding the average particle diameter recited in claim 4. The examiner takes the position that such property is considered inherent in prior art binder because emulsion polymerization methods are utilized by applicants and the prior art. The burden is placed upon the applicant to provide clear evidence that the respective binder compositions do in fact differ. In any event, one skilled in the polymer art would expect the average particle diameter of the polymer particles obtained from emulsion polymerization to be the claimed range (see any polymer textbook). Thus, one skilled in the art would envisage the instant particle diameter obtained by emulsion polymerization, absent a showing of the contrary.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS

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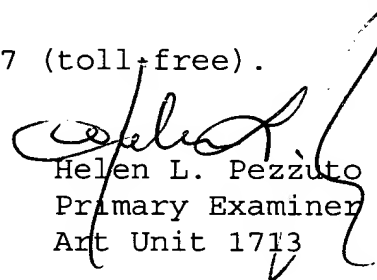
of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen L. Pezzuto
Primary Examiner
Art Unit 1713

hlp